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REGULAR ARTICLE

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The true story of wine and cloth, or: building blocks of an evolutionary political economy of international trade

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Abstract Standard trade theory is a theory about the structure of international production which emerges from an international arbitrage equilibrium. It is not a theory about the activity of trading which is simply taken for granted or which is treated implicitly in the concept of exogenous trade costs. This paper proposes an alternative evolutionary framework based on networks as structures of non-price interactions into which price/quantity-interactions are embedded. These networks manifest different levels with specific problems of coordination and communication, i.e. levels of market transactions, of transaction-enabling transactions, of markets for market access rights, and of the respective transaction-enabling transactions. Furthermore, the theory is based on the analysis of capabilities to trade, resting upon competitive advantage, which cannot be imitated. The exploitation of competitive advantage presupposes the capability to control network interactions, identified as social capital. Finally, the security of market access reflects power balances among countries.

Keywords Trading and trade · Networks · Capabilities to trade · Market access rights · Power relations among countries

JEL Classification B40 · F10 · F13

1 The strange absence of trading in the theory of international trade

The principle of comparative advantage is one of the most respected theorems in economics. It is the cornerstone of the theory of international trade and the intellectual foundation of the free trade doctrine. To argue against free trade is

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tantamount to putting the principle of comparative advantage into question, which is almost a sure way to play havoc with an economist's reputation.

Yet, there are problems with the Ricardian story which justify a rethinking from the evolutionary point of view. To recognize these problems, it is sufficient to look at the textbook treatment of the Wine and Clothes metaphor, which is still the point of entry for many freshmen into the theory of international trade. This story is not about international *trade* in the sense that the import and export *activities* of traders are explained. It is about perfect international arbitrage and about equilibrium, which assumes away all the ordinary problems of trading across borders: how to get information about foreign markets, how to secure market access, how to supervise contract fulfilment, how to arrange payments, or how to file a case outside one's own jurisdiction if the exporter cheats. Of course, students are told that these problems exist, but these are not crucial to an understanding of the core *economic* principles of trade—and students do learn a lot about this in practical manuals and textbooks about international business and trade. Yet, trading does not play a pivotal role in the theory.[1] The result is that the theory of international trade after Ricardo has mostly been a theory of international production: global markets are assumed to provide the information about the optimal production structure mainly via the price system, and this structure emerges without any further ado.

If we look at the contributions of evolutionary economists, this assertion remains true. They mainly focus on the role of technology in trade, which means that they also talk about the structure of international production. Trading proper is not their concern, presumably because it is not related to the core phenomenon in evolutionary economics, namely technological innovation. Hence, the role of the entrepreneur in international market-making is mostly neglected. The difference between the evolutionary approach and the equilibrium theories rests upon a different view of the production process, but not of trade properly spoken, i.e. in the sense of trading.[2]

[1] For a similar assessment, see Schmidtchen (1987) and Dunning (1995). Just check with the leading advanced textbook, Feenstra (2004). This admirable book covers virtually all cutting-edge research results. Yet, its structure follows the conventional sequence in outlining firstly the standard models (2 × 2, Heckscher–Ohlin etc.), only to touch trading activities in the context of the gravity equation (to which we return below). The final chapter (eleven) starts with the remark "Despite the fact that this book is about international trade, we have so far not introduced any role for *traders*." (his italics) However, this chapter is on FDI and capital flows. There is a brief section on transaction costs, but only with reference to the theory of the firm. Feenstra explicitly sets a discussion of this point aside, just recommending further readings.

[2] These sweeping assertions depend on the definition of "evolutionary economics", because there is a fuzzy boundary with international business studies, geography etc. For example, the volume edited by De la Mothe and Paquet (1996c) gathers contributions to the field, and the introductory chapters by the editors attempt a "grand design" of an evolutionary international political economy. There are also some institutionalist contributions in the American tradition of evolutionary thinking, as collected in Adams and Scaperlanda (1996). However, seminal contributions such as that of Dosi et al. (1990) or the entire literature reviewed and processed by Meliciani (2001) or Fagerberg (2003) focus on technology exclusively. In other words, the assessment of the literature depends on whether you look at the way in which evolutionary economics deals with globalization and trade, or whether you search for evolutionary approaches in globalization studies. I adopt the former perspective, which underlies the assessment in the main text.

Within economics (which may be regarded as being different from international business studies), until very recently the only research strand that has paid attention to trading proper is the work of some institutional economists on the problems of international contracting. This work emphasizes the fact that international trade crosses boundaries between jurisdictions. However, the problem with this work is that there is a neglect of the other issues in trade, in particular the very problem of industry specialization, which is traditionally in focus.[3]

The lopsided emphasis on production in traditional theory has important consequences for policy analysis. In the mainstream approach, the principle of comparative advantage underlies the free trade doctrine and provides ultimate legitimacy even to international organizations like the WTO. Evolutionary economists mostly do not touch upon such fundamental issues of policy, but instead focus on more down-to-earth topics such as technology policy, which do not relate to systemic questions. As a result, the "Political Economy" of international trade is mostly dominated by mainstream trade economists who wish to explain the real-world deviances from free trade via the special interest approach to protection. Thus, politics is almost exclusively perceived as source of impediments to trade, and not as a possible factor in making international trade possible. Broader aspects of the politics of international trade are mostly tackled by political scientists.[4]

In this paper I wish to outline the basic structure of an evolutionary political economy of international trade that pays attention to major concerns of the traditional approach, but extends the framework considerably, including new theoretical principles that substitute for the rigid equilibrium structure in mainstream theory.[5] In that context, my use of the term "evolutionary" refers to an approach which emphasizes complexity, dynamic change at the micro-level, uncertainty and entrepreneurship, and domain-transcending patterns of interaction. We start with a brief discussion of the state of the art in the theory of international trade. In Section 3, I develop the core principles of a network theory of trade, which are elaborated in Section 4 with the help of a new theory of competitive advantage underlying the capacity to trade. This is embedded in an explicit treatment of the political economy of power relations among trading nations. Section 5 draws conclusions on research methodology. The paper tries to incorporate as many contributions from the mainstream approach as possible, while trying to outline a different conceptual framework. To keep the paper readable, I relegate the review of the literature to the footnotes.

[3] For an overview about the so-called "New Institutional Economics of International Transactions" see Schmidtchen and Schmidt-Trenz (1990). Outside Germany, similar research has been inaugurated with the seminal work by Yarbrough and Yarbrough (1992), which focuses on trade policy, however.

[4] For a well-informed survey and direct comparison between neoclassical political economy and the "international political economy" of political science, see Gilpin (2001, chapters 3 and 4). There is a distorted relation between economics and political science, with the latter actively adopting results and methods from economics, and the former ignoring the other field almost completely; see Moran (1996). Baldwin (1996) is one of the few trade economists who has called for a closer collaboration across the disciplines. He recommends an actor/interaction based approach, which is very close to our network approach.

[5] The paper is based on the two volumes published recently in German. See Herrmann-Pillath (2001b, 2004). Some preliminary work has been published in English, see Herrmann-Pillath (2000; 2001a).

2 The issue of trade costs: pointers towards rethinking international trade in the mainstream literature

In the past two decades, research on international trade has been extremely vigorous and fruitful, specifically in applying advanced empirical and econometric techniques to puzzles emerging in the traditional theory, such as the "missing trade" puzzle raised by Trefler (1995) and the "border puzzle" discovered by McCallum (1995). Most of these puzzles are related to the general observation that there is a large deviation between the straightforward empirical predictions of the standard theory and the data. However, these deviations need not be regarded as refutations of the theory, because there are many ways the theory can be amended and enlarged to improve the match with the data. Thus, the fundamental models of trade theory (Heckscher–Ohlin, Ricardian and so forth) remain the core of a progressive research program in the sense of Lakatos.[6]

As already noted in the introduction, the established trade theory is not a theory of *trading*, but of international *production*. This bold assertion results from the observation that the vast majority of hypotheses of trade are not about the activity of trading, but about the international division of labor resulting from a change in the price vector that follows the opening to trade. This is also true for the most recent developments in trade theory that focus on the role of trade costs in trade models, because virtually all of them treat trade costs as exogenous determinants of the equilibrium price vector.[7] Trade costs as such are not further explained, even though there are explicit descriptions of the activities that underlie the causation of trade costs, such as searching, information asymmetries and so forth. In the context of theories on regionalism, this inclusion of trade costs has become even more

[6] For a detailed assessment of the "progressiveness" of the standard approach, see Bensel and Elmslie (1992) who analyze the incorporation of imperfect competition into the basic models to demonstrate their "progressiveness".

[7] This has a long tradition in economics. In most conventional trade theories, trade costs are modelled as transportation costs of the so-called "iceberg" type, first introduced by Samuelson. These costs "melt" the value of goods proportional to distance. Although Krugman (1995, p. 1273) actually wonders about the strangeness of this assumption, in his own work he sticks to this approach. Compare Fujita et al. (1999), for example, pp. 49f., 97ff. This approach needs to be distinguished from the empirical research on trade costs which is aptly summarized by Anderson and van Wincoop (2004). They conclude their survey with the words: "Our focus is on measuring the costs, only glancingly with their explanation. Ultimately, the profession should proceed to explanation. There is undoubtedly a rich relationship between domestic and international trade costs, market structure, and political economy. Some trade costs provide benefits, and it is likely that the pursuit of benefits partly explain the costs."

sophisticated via the introduction of sunk costs of international market entry. Yet, these costs remain an exogenous parameter of the models.[8]

In neoclassical theory, this neglect of trading reflects its main concern, namely the study of the allocative, productivity and welfare effects of trade. Looking back on the development of trade theory over the past century, this focus on production is easily to recognize. The Heckscher–Ohlin and the Ricardian approaches differ only in terms of the assumptions on the production function and technology. The so-called Leontief paradox relates to the input structure of international production. The "New Trade Theories" introduce increasing returns into the production function. The most recent interest in "fragmentation" is mainly a theory of fragmentation of production.[9] Thus, theoretical progress in the theory of international trade is mostly driven by extensions and adaptations of the underlying theory of production.[10]

If we compare the contemporary research with earlier contributions where transport and trade costs have been simply treated as being non-existent, the recent interest in trade costs represents great progress within the paradigm. The main motivation is to use trade costs to explain empirical violations of core hypotheses of the arbitrage mechanism that underlies the standard equilibrium approach. The most simple one is the law of one price and the related expectation that exchange rate movements will equalize prices across countries, such that purchasing power parity holds.[11] To explain persistent deviations from LOP, economists rely on the

[8] Consider the work of one of the leading researchers in the field of networks and trade costs, James Rauch. Rauch (1999) has an indirect explanation of trade costs, which relies on the distinction between differentiated and standardized products, with the former requiring higher search input. Rauch and Trindade (2003) is one of the most recent contributions which takes the question as the starting point whether an improvement of the availability of information via the internet will cause a convergence of trade patterns to the Heckscher–Ohlin equilibrium which they measure as international convergence of wage rates. However, this is checked via an exogenous variation of trade costs, which remains unexplained. Freund (2000) and McLaren (2002) relate the relative market power of exporters with the sunk cost which influence their ex post competitiveness in a way that regional arrangements become welfare maximizing. The sunk costs remain an exogenous parameter. There are strong empirical hints at a crucial role of sunk costs in export activity, such as the fact that only a subset of firms in an export industry actually export, see Hummels and Klenow (2005).

[9] We can illustrate this series of observations with one example. Fragmentation is a phenomenon which obviously entails complex intra-firm transactions and supplier networks. However, Deardorff (2001) tries to tackle the problem by analyzing trade across cones, for which factor-price-equalization does not hold. This is the typical production theoretic approach. Harris (2001) introduces the idea that fragmentation may be related to network externalities in trade related communication processes. However, even here the crucial determinant remains production, namely communication technology as production of communication services.

[10] I have presented a full analysis of this phenomenon in Herrmann-Pillath (2001b, chapter 3) in the context of the so-called new structuralist approach in the philosophy of science. It can be shown that neoclassical trade theory is a formal structure which consists of certain empirical regularities, fundamental laws as the theorem of the international equalization of factor prices, constraints across empirical applications as the assumption of the same technology matrix, and finally a special law which is tested in particular applications of the theory. This special law is the production function. Hence, mainstream trade theories are about alternative theories about the production function, but not about trade.

[11] The Law of One Price is one of the oldest hypotheses in economics. For a survey on its relation to exchange rate theory, see Goldberg and Knetter (1997) and on direct econometric tests of LOP, see Taylor (2000). Anderson and van Wincoop (2004: 736ff.) review the more recent contributions. I have discussed the literature from the evolutionary perspective in Herrmann-Pillath (2001a).

analysis of goods characteristics that directly affect trading. The most important determinant is lack of information about the quality of goods. This has drawn attention to the role of search costs in trade. However, following the earlier literature on transportation costs, search cost are often treated as a given, which reflects the static properties of goods. Hence, there is no explicit analysis of search as a part of the traders' entrepreneurial activity.[12] Related to this, there has been a burgeoning research on border effects in trade. In most empirical tests, very strong border effects can be detected, even if regions are in focus where trade barriers have been dismantled.[13] These border effects cannot be explained in the traditional theory, although the very definition of international trade must be that it is cross-border.

The analysis of border effects requires the reference to an ideal, cost-free model of trade relations. One of the major issues in empirical trade research is the fact that seemingly atheoretical approaches such as the gravity equation work well, whereas the core hypotheses of equilibrium trade theory are more difficult to corroborate (actually, there have been many refutations). Although this awkward role of gravity was amended in the mid-1990s, a new dilemma emerged that today almost every theoretical assumption might be reconciled with the gravity equations, which means that the most important empirical regularity in trade cannot be used to choose among competing trade theories. Interestingly, gravity equations are the most-used device for testing for network effects in international trade, as e.g. the role of a common culture, which presumably are an important determinant of trade costs without being an explicit part of the standard trade models.[14] On the other hand, the problems with the standard model are most frequently related to the question of how the spatial directedness of trade can be fully explained.[15] Both observations give strong hints at the role of trading proper in the emergence of the international division of labor.

There is an interesting link between the issue of trade costs and other difficulties with the standard theory, which are related to its normative implications. Trade

[12] The role of goods characteristics has been emphasized by, among others, Rogers and Jenkins (1995). Rauch (1999) shows how these might be related to the comparative efficiency of networks in arranging international trade transactions as compared to markets.

[13] For a survey of this literature, see Helliwell (1997). It originated with contributions by McCallum (1995) and Engel and Rogers (1998).

[14] For a rationalization of the gravity equations in a neoclassical context, see Deardorff (1998). A collection of applications of the gravity equation to the relation between trade and culture, history etc. can be found in Frankel (1997). For a survey, see Feenstra (2004, chapter 5). One of the most advanced empirical applications providing an explicit theoretical foundation is Anderson and van Wincoop (2003). They analyze relative trade costs and heed attention to the fact that, for example, multilateral trade resistances affect bilateral exchange via the effects on bilateral price levels. As a result, border effects become much weaker, but still hover around a 30–50% reduction relative to domestic trade.

[15] The earlier literature is summarized by Leamer (1992), who simply concludes that trade economists definitively do not follow the prescriptions of falsificationist testing. The more recent upsurge of empirical studies on the Heckscher–Ohlin theorem was triggered by Trefler's (1995) discovery of lots of "missing trade" in econometric tests, which compares unfavorably with the generally good fit of the gravity equations. He tried to remedy the situation by introducing differences in total factor productivity using the Armington assumption. An interesting synthesis is Davis and Weinstein (1998), which merges an H–O Model with parameters from gravity models to specify the demand side. However, it is revealing that most trade economists try to find explanations of trade patterns that refer to the production side, such as Hanson and Xiang (2004) who explain the home market effect in gravity systems by differential country size, which gives rise to increasing returns in differentiated goods.

costs are a crucial determinant of the degree of substitutability between domestic and foreign goods and hence of the elasticities in trade. These elasticities play an important role in predictions about optimal trade policies. One of the central normative results of trade theory is the unconditional optimality of unilateral liberalization, at least for small countries. This implies that protection should be a marginal phenomenon in international trade, which is flatly contradicted by experience. This is mostly explained by national interest group politics and the existence of a collective goods problem in the formation of pro-trade interests. However, this begs the question why politics should not be able to strike a bargain via compensation payments. This observation is related to the former puzzles, because the optimality of certain tariff policies depends on the elasticities of demand. Empirically, this elasticity is much lower than suggested by the observed relative size of countries, which means that there are hidden impediments to trade which affect policy choices. This relation between trade costs and policy is most evident from the regionalism debate to which we referred previously in the context of sunk costs. Indeed, in some contributions, a complete reversal of normative prescriptions of trade theory occurs if the effects of trade costs on bargaining strategies of countries are scrutinized.[16]

This potential indeterminacy of the most sacred normative statements of trade theory is disturbing, because it results from the consideration of phenomena that are an integral part of real world trade. But there is also a theoretical issue that arises from the current attempts at explaining protection within the equilibrium framework. This is the "determinacy paradox". If all interests are treated as endogenous, protection results as a political equilibrium, which is optimal under the given assumptions. Economic theory can no longer advise policy makers, because ultimately it has to endogenize itself. Theory can only advise policy if it is already in the interest of the politicians to follow—but this means that the advice was not necessary at all.[17]

The determinacy paradox raises the question whether complete endogenization of all determinants of trade (to which trade policies belongs) is a viable objective of research at all. It is also linked with the fundamental observation of second best welfare theory, which shows that free trade may be Pareto-inferior if domestic distortions exist. Traditionally, this observation has led to the conclusion that policies that directly treat the source of the distortion are most optimal as compared to trade interventions. However, if the costs of intervention are also considered, this conclusion becomes indeterminate. In particular, there is a parallel between the

[16] Irwin (1996, pp. 222ff.) is a very good discussion of the many difficulties of providing an empirical base for the free-trade doctrine, which the author definitively favors. He particularly emphasizes the issue of elasticities, which affects the scope of the applicability of the optimum tariff argument. McLaren (1997) shows how the inclusion of sunk cost allows an analysis of power differentials among countries and concludes that the widespread view is right that small countries might become dependent on large countries. As a result, the entire gains from trade might be shifted to the latter, with the small countries even suffering a deterioration. Thus, free trade is no longer the optimal choice. Chisik (2003) shows that sunk costs of trade turn a gradualist strategy of moving from preferential agreements to free trade into the optimal one.

[17] The determinacy paradox has been formulated by neoclassical trade theorist Jagdish Bhagwati. For a survey and discussion see O'Flaherty and Bhagwati (1997). The paradoxical nature of policy advice is analyzed by Basu (1997). In their classic, Magee et al. (1989) demonstrate that general political equilibrium may even result into a state of the economy where lobbyism devours the entire social product!

neglect of trade costs and the neglect of political transaction costs in the standard model. Once political transaction costs such as the sunk costs into lobbying are explicitly considered, the normative basis for policies is shaken. It becomes impossible to rank institutional states if distortions and political transaction costs interact. This problem is exacerbated in the theory of rent-seeking, if private investment into the generation and maintenance of distortions is endogenized. In that case, the most inefficient institutions might be the most optimal ones because wasteful rent-seeking is minimized.[18]

These and similar results may explain why, in reality, the free trade regime is indeed very difficult to achieve. In spite of two centuries of preaching good economics, most governments still stick to a quasi-mercantilist strategy in international trade negotiations. This has profound implications for the design of international institutions, which are still a setting for the international exchange of market access and of mutual privileges in trade, but not of an international institutional regime for free markets. Generally, there seems to be a deep gap between economic and non-economic thinking in politics, which may be resolved paradoxically, because non-economic thinking can be shown to be the more efficient if political costs and benefits are paid attention to. However, this leads us back to the determinacy problem.[19]

In sum, the recent developments in trade theory have produced many new insights and have proven the progressiveness of the paradigm. At the same time, however, the relation between theory and reality has become more indeterminate, with the degrees of freedom increasing continuously. Depending on the modeling assumptions, almost any positive and normative statement about trade can be justified: for example, depending on the model, regional trading arrangements can be welfare-increasing or decreasing. In spite of progress, there is no clear movement toward a particular theory as the approximation of the true model. I take this observation as a point of departure for proposing an alternative view which is based on entirely different fundamental assumptions and introduces a conceptual framework that goes back on some recent developments in evolutionary economics. My argument builds on the belief that our main problems with the mainstream approach are rooted in how reality is approached on the ontological level, i.e. how we describe and identify the basic units and structures in international trade, and are less related with specific hypotheses and theorems

[18] For a survey on second-best theorizing in the analysis of protection, see Srinivasan (1998). One of the first contributions that demonstrated the reversal of policy rankings if the costs of organizing interest groups are included in the standard model was Rodrik (1986). The argument relies on the observation that those institutions might be preferable that give rise to free-rider problems in the organization of lobby groups, which in turn lead to the under-provision of rent-seeking investments. In the end, this is but a special version of the general paradox in Bhagwati's (1982) theory of DUP activities, where rent-seeking might be welfare increasing if it withdraws resources from distorted activities. For further debates over the role of costs of lobbying in determining the optimal trade policy, see Pecorino (1998) and Magee (2002). For a general approach to political transaction costs which moves from a mainstream to an evolutionary perspective, see Dixit (1996).

[19] For a detailed case study on this point, see Sykes (1996). Sykes demonstrates that economic methods in determining injury in anti-dumping cases may be suboptimal, if those cases are viewed in the light of political feasibility and viability. The "non-economic" methods allow an identification of the political costs and benefits and hence are shown to be efficient. This analytical approach is similar to Wittman's (1995). On the economist's criticism of contemporary "mercantilism", see Krugman (1997).

which can only be formulated after the ontological basis has been clarified. The issue of trade costs is just the tip of that ontological ice-berg.

3 The baseline: a network approach to trade

Interestingly, our point of departure is very close to most recent developments in the mainstream trade theory, where recently an upsurge of interest in network approaches may be observed. The reason is precisely that network theory shifts attention to trading activities.[20] This raises the possibility of a convergence between equilibrium thinking and evolutionary approaches, because in the latter the network concept has also gained much prominence.[21] In fact, there is an important strand in international business studies where for long networks have been regarded as the core analytical category in understanding trade and investment across borders.[22]

Subsequently, we desire to develop a synthetic network approach that unifies these very different analytical paradigms.[23] The main ontological assumption is that, for international transactions, price signals are not the single or even the most important media of coordination. Instead, markets are seen as being embedded in non-price interactions. The structure of these non-price interactions, if observed at a certain point of time, is called a network. The link between standard approaches and the network paradigm is a straightforward one: the neoclassical equilibrium is a type of network that would be integral and complete, hence manifesting a full diffusion of all relevant information across all actors (which, if information costs are included, implies information about the information costs, such that "rational ignorance" becomes a viable state of the model). By comparison, real-world networks are always non-integral, meaning that there are many structural holes. These holes provide an opportunity for entrepreneurial action directed at developing new network linkages.[24] Furthermore, in non-integral networks there is a particular distribution of information about network activity. Actors in networks do not completely oversee the actions of all other actors, which means that the network also shapes the way how information diffuses in the system. Consequently, to explain transactions in causal terms, minimally it is necessary to

[20] For a survey on recent contributions see Rauch (2001) and Rauch and Casella (2003). This reflects a general trend in equilibrium theory to introduce networks as determinants of equilibrium that work differently from price–quantity mechanisms. See e.g. Kranton and Minehart (2001). A survey on related empirical work can be found in Combes et al. (2005).

[21] The foundational contribution here is Potts (2000), from whom we adopt concepts like "non-integrality". For a programmatic treatment, see also Potts (2001) and Loasby (2001). So far, the paradigmatic opening of the mainstream approach mostly works through the bridge to economic sociology, as in Rauch and Casella (2003). The relation with evolutionary economics seems to be less fully explored.

[22] This is the so-called "Scandinavian" school in international business studies, as in Forsgren and Johanson (1992b) or Blankenburg Holm et al. (1996).

[23] The full background of this approach is developed in Herrmann-Pillath (2002). See also http://www.evolutionaryeconomics.net.

[24] This concept of entrepreneurial action in networks was first proposed by Burt (1992). Indeed, the evolutionary approach has close relations with structural sociology. There are some applications of social network theory on international trade. However, these mostly operate on the level of countries as basic units, which fails to provide a microfoundation for trade theory.

enlarge a price-quantity model with a description of a specific network structure and a description of the distribution of information across actors.

Look at the Wine and Clothes metaphor. Here, prices are the only medium of communication. From the network perspective, it is at least as important to look at the social relations that underlie the way in which, for example, Portuguese wine producers come into touch with British importers. The way they interact will be strongly influenced by the shape and density of existing social relations and of the information about markets that is processed therein. The price-quantity model needs to be enlarged by a thick description of these network structures. This is what is actually done in empirical research about non-economic determinants of trade using the gravity framework.[25]

This general network approach is valid for any market transaction. Now consider the specific problems actors face in the context of international trade as compared to domestic trade. Basically, we may assume that in international trade

a) there are additional problems in finding reliable trade partners.
b) there are special problems with market access across borders.

Turning firstly to a), international trade faces special challenges regarding the availability, the processing and the interpretation of information.[26] In terms of network structures, we note that the degree of "non-integrality" of networks must be significantly higher internationally than nationally. Reasons are manifold, as, for example, different languages, different standards of goods descriptions, different social customs etc., all of which contribute to a significantly lower availability of information, which is in turn needed to develop network linkages via transactions. From the evolutionary perspective, this has two main effects. The first is that network dynamics will be driven by attempts to find remedies for this lack of information. The second is that, in international trade, there are exceptionally large profit opportunities offered by the existing structural holes. That is, international trade offers strong incentives for entrepreneurial action and at the same time implies the existence of relatively strong power positions in networks based on monopolistic advantages. This entrepreneurial action leads to the discovery and the diffusion of new information in the network. This implies that a specific state of information in the network is dependent on the history of structural change and of contingent entrepreneurial action.

In order systematically to understand the network structures underlying trade, we propose to distinguish between two different categories of transactions:

1. the first is the transaction proper, namely the transfer of goods and services and the related transfer of ownership rights, and

[25] A good example for such an approach is Casson's (1997, pp. 250ff.) analysis of chartered trading companies. Casson favors a so-called "schematic approach" that distinguishes analytically between the flows of information and the flows of resources. For an example of an explicitly cultural interpretation of gravity tests, see Flörkemeyer (2004).

[26] There is a large literature on this in international business studies, for example in the context of barriers to entry for SME. For seminal contributions see Abdel-Latif and Nugent (1996) or Leonidou et al. (1996).

2. the second is the transaction-enabling transaction (henceforth: TET), that is, the services that are needed to realize the transaction proper.[27]

Evidently, both can be based on different network structures and can be related to different actors in the division of labor. Look at the wine producers and wine consumers, who are the main actors in the primary transactions. Their exchange relation can be supported by many different kinds of TETs. For example, wine consumers might be exporters at the same time who have set up a branch in Portugal, or, Portuguese grape growers might have many emigrant relatives in Britain who manage the import trade there. The way these networks are organized has important consequences as to the way in which gains from trade are divided among both sides.

The distinction between transactions and TETs is of crucial importance for trade analysis, because TETs directly reflect the network structures into which trade is embedded. TETs include complex arrangements in international trade, as, for example, countertrade arrangements which solve special problems of contracting and payments.[28] One of the most important TETs is the multinational firm, which is the network structure underlying intra-firm trade. The description and explanation of network structures and the development of a taxonomy of network types is one of the basic tasks of the evolutionary trade theory. Frequently, these types are embedded into non-economic structures, yet evolve under the impact of market competition.[29]

TETs are also important for the analysis of market access. Some scholars have claimed that the crucial characteristic of international trade lies in the fact that it crosses boundaries of jurisdictions and legal areas.[30] This implies that there are special problems of contracting, which further accentuate the problems because the question of the reliability of trading partners becomes even more important. An important dimension of these problems can be highlighted if we distinguish clearly between market transactions and market access. International trade shows special problems of market access, first, in terms of offering domestic legal protection to foreigners, and second, in terms of the time span for which market access rights are granted.[31] If we treat governments as a given, one of the most fundamental features

[27] This idea borrows from Hirsch (1989) and was extended in Herrmann-Pillath (2001b, pp. 497ff).

[28] For an example of network concepts, see Fletcher (1996). Marin and Schnitzer (2002) demonstrate extensively how countertrade can be explained as a solution to specific problems in international contracting. This compares with the standard view that barter and countertrade are inefficient ways to organize transactions which reflect political restrictions and uncertainty.

[29] For an example in the mainstream context, see Feenstra et al. (1999), who show that network structures in East Asia co-evolved with the patterns of product specialization. A now classical analysis of network structures in international trade is Greif's (1994) comparative study of Genovese and Maghribi traders in medieval trade across the Mediterranean. Greif's analysis is based on the differential effects of social structures on the enforcement mechanisms.

[30] The seminal contribution is Schmidt-Trenz (1990), which is one of the founding stones of the "New Institutional Economics of International Transactions".

[31] The term "market access" plays a big role in international trade negotiations, in particular as far as the link between services and trade is concerned, e.g. in the context of non-tariff barriers to trade. Its theoretical dimension was first explored by Harris (1989), although without deeper repercussions in the analytical literature. Bagwell and Staiger (2001) came close to the concept of MAR when coining the expression "market access property rights", although they did not apply tools of institutional and evolutionary theory.

of international trade is that network structures always need to be differentiated into two levels, the market actors' level and the government level. Governments are the primordial institutions which control and regulate market access and, hence, the long-run stability of trading networks and the related expectations of the actors.

Every trader, thus, faces a problem of finding a trading partner and a problem of securing the pertinent market access right (henceforth: MAR). This problem becomes the more important, the more specific the investments needed to open up and to develop the new trading opportunity.[32] Even if the trading partner is reliable and even if the opportunity is transparent, the MAR might be insecure, such that investments into the future development of the trading relation are held up. This leads to the conclusion that international trade will be heavily influenced by the mechanisms that secure MARs.[33]

Now consider pure international anarchy, in which there are no legal means to claim MARs. Here, the only solution lies in self-enforcing regimes. Self-enforcing regimes can be uni-dimensional or multi-dimensional: uni-dimensional regimes rely on retaliation as the primary means to secure market access, i.e. the suspension of reciprocal access rights. Multi-dimensional regimes embed those rights in other relations among countries, as, for example, security relations.

As we see, international trade is at least an activity that consists of transactions on four different network levels. After having distinguished between

1. transactions and
2. the related transaction-enabling transactions,

we now introduce

1. transactions of market access rights and
2. the related transaction-enabling transactions

at this level. On every level, different network structures can be involved. For example, Portuguese grape growers might be concerned about the security of market access in Britain. Because they need to enlarge the area devoted to grape cultivation, they need additional assurances of the long-run security of rights. There are two ways to achieve this. One is uni-dimensional. Portugal might offer reciprocal market access for British cloth, which implies that, in case of the withdrawal of British access rights, Portugal may in turn suspend Portuguese rights. Therefore, an additional level of transactions over access rights is needed, which involves entirely different actors than on the market level. This becomes

[32] The Williamsonian idea of specific investments as determining force of the institutional shape of transactions has been applied systematically on international trade regimes by Yarbrough and Yarbrough (1992). A related theory has been developed for international transactions by Engel and Rogers (1998). Their approach supplements the Yarbroughs' argument by emphasizing the specificity of investments into marketing and distribution channels. This point can already be found in Harris (1989). A much-quoted empirical study on sunk cost in trade is Roberts and Tybout (1997). McLaren (1997) provided many examples of how countries adapt their trade policy strategically in order to cope with effects that result from sunk costs and specific investments, which includes the very process of specialization proper.

[33] Empirically, a strong influence of institutional quality on trade could be shown, as in Anderson and Marcouiller (1999) or De Groot et al. (2004). This refers to the effect of the security of rights in general which actually determines the context of a specific MAR.

even more complex in the multi-dimensional case. Here, market access rights might be secured because there is a military alliance between Portugal and Britain the stability of which could be endangered in case of a British withdrawal of access rights.

The importance of these distinctions can be highlighted in the fundamental specialization dilemma of international trade. In general, the specialization dilemma refers to the uncertainty that might prevent a producer to specialize according to perceived comparative advantage, if there is a coordination failure that might cause a change in ex post bargaining power between the trading partners.[34]

In the most simple version, the specialization dilemma occurs if traders/producers need to invest in assuming their position of comparative advantage, and if they cannot observe the other's actions to assume the complementary specialization pattern. This implies that, if one trader fails to specialize according to the agreement, his bargaining power increases ex post. This is the standard hold-up problem, well understood in New Institutional Economics. In international trade, the relevance of this point is strengthened if one considers the information problem linked with the discovery of comparative advantage. Consider the state of information in autarky. In autarky, domestic producers only know their domestic comparative advantage. They need to learn about their potential advantage if the country opened to trade. This, however, is uncertain. Now assume that foreign traders discover the comparative advantage of domestic producers. How can they motivate domestic producers to specialize and to trust the future market access to the foreign country?[35]

The problem of specialization is much more complex than this simple example suggests. This becomes obvious if we turn to the other transactions. First, the specialization dilemma may also hold for transaction-enabling transactions. Let us distinguish between generic and partner-specific TETs. A generic TET is complementary to the original specialization and poses no additional difficulties (for example, a special transport device might be needed). However, a partner-specific TET may cause an additional hold-up problem. For example, Portuguese traders may need to invest into a marketing system that is specific to Britain. Obviously, the number of permutations between network structures further increases, because, for example, Portugal may solve the primordial specialization dilemma and specialize in wine, but may nevertheless fail to specialize on a TET

[34] Schmidtchen and Schmidt-Trenz (1990) coined this expression in the context of international trade to highlight the institutional determinants which impact on the degree how far the potential comparative advantages are actually realized, McLaren (1997, 2002) adds a further dimension to the problem in emphasizing the impact of expectations on actual behavior. In order to avoid the dilemma, export producers might adapt their production structure ex ante such that comparative advantage becomes endogenous. This implies that the ex post pattern of specialization appears to be efficient even though ex ante other patterns would have been more efficient, if the specialization dilemma had been resolved credibly.

[35] The discussion in Fernandez and Rodrik (1991) illustrates this problem very well. In many real contexts of trade policy reform, even the ex post winners are reluctant to turn out supporting votes. This is caused by the asymmetry of the learning process, with non-implementation generating no information about lost opportunities, whereas implementation generates losers and winners. The process how comparative advantages are discovered is a topic in the literature about the self-selection of more productive export firms through the entry into international trade. See e.g. Bernard and Jensen (1999) and Melitz (2003). However, this literature does not establish a linkage with institutional issues.

that is specific to Britain (if there are other countries, too). This reduces trade, unless British traders offer a solution, which shifts gains from trade to them.

From this, we reach a far-reaching conclusion about the possible direction of the evolution of networks in international trade. This is the specialization dilemma of the second order. This dilemma is as follows. Think of specialization taking place according to comparative advantage. If specialization becomes more and more articulate, and if, therefore, increasing differences across producers, consumers and countries become a determining force of the division of labor, then partner-specific investments become increasingly important for trade. If the specialization dilemma on the first level is solved, the dilemma on the second level regarding TETs strengthens its grip. Therefore, the expansion of trade creates the forces that build increasing obstacles to trade. This implies that the institutional evolution of trade will go into the direction of solving this second-order problem. One of the most important solutions is foreign direct investment and the increasing reliance on intra-firm trade, which we observe in reality. This means, that the very process of increasing specialization according to comparative advantage leads to a growing importance in non-price interactions for international trade, which undermines the applicability of the very analytical principles on which the standard approach is based.[36] Now similar considerations are relevant for the transactions over MARs, i.e. at the next levels of transactions. If more market access rights are granted among countries, this opens the possibility for specialization. However, this aggravates the hold-up-problem and hence increases the need for mechanisms to assure the long-run reliability of rights. Again, we may venture the hypothesis that the importance of non-market determinants of trade relations will also increase at this network level, i.e. the relations among governments. This is precisely what we observe in the strong trend towards regionalism. Whereas the old GATT was basically a market regime for MARs, the contemporary international economic order becomes more and more embedded into complex political, contractual and cultural relations among countries.[37]

Summarizing, let us draw the different threads of the argument together. The crucial insight is that international trade takes place and is supported in a complex structure of networks among actors on different levels and of different kinds. In these networks, opportunities for trade are continuously created and exploited, which leads to interlocking transactions on different levels, in which the original transactions on the goods and services markets are embedded. These transactions enable transactions and secure MARs.

[36] The mainstream approach to FDI is mostly focused on the knowledge capital aspect of the international firm and/or the internalization issue. For a penetrating survey, see Markusen (1998), which attempts to endogenize the firm into the standard equilibrium approach of trade theory. By contrast we emphasize the autonomous role of firm organization in making trade possible, i.e. I focus on the complementarity of trade and investment.

[37] It is revealing to note that the economic research into regionalism has shifted towards the acknowledgement of political factors, without denigrating them as being harmful to efficiency. See World Bank (2000). This is a big turnaround if one compares this with the clear-cut condemnation of regionalism by neoclassical mainstream theory, as summarized, for example, by Pomfret (1997). Ethier (1998) is a brief and succinct attempt at formalizing this alternative view on embedded regionalism. Mansfield and Bronson (1997) show that political and military relations can exert an impact on trade flows that is stronger than that of preferential trading agreements proper. A full treatment of the regionalism issue and the related literature may be found in Herrmann-Pillath (2006).

Continuing with the analysis, this would be tantamount to a complete microfoundation of trade analysis. This is almost impossible in quantitative terms, where we only observe aggregate trade flows and patterns of industry specialization, institutional arrangements among countries etc.[38] In most circumstances, the micro-structures of trade are only accessible in detailed case studies and in historical research. Therefore, the question arises whether there are alternative categories for aggregate analysis. In the next section, I introduce some simple concepts for aggregate analysis in the Evolutionary Political Economy of Trade which further accentuates the differences between the evolutionary and the mainstream perspectives that result from diverging ontological assumptions.

4 International trade and the capacity to trade

Let us start from the capability or capacity perspective. International trade takes place if there are opportunities to trade and if traders actually have the capacity to exploit these opportunities. The question is how to understand both.

We now introduce the following three perspectives on the problem:

1. The first perspective starts from the familiar concept of sustainable competitive advantage. This is a simple idea: specialization according to comparative advantage becomes a competitive advantage if it cannot be eroded by imitation. Hence, limits to imitation need to be scrutinized to understand the causes for international trade. This is very different from the comparative advantage perspective, because comparative capabilities come into focus (instead of given factor endowments). Furthermore, we introduce "demand pull" and "supply push" as forces determining trade. Demand pull arises from the discovery of domestic comparative advantages by foreign traders, supply push by the domestic traders themselves. Evidently, both forces need not converge, which is one of the most difficult obstacles to trade: trade must be based on convergent perceptions of comparative advantage and, hence, communication processes.[39] If in the next step we ask for the most resilient determinants of competitive advantages, we propose that these must be non-tradable factors, which at the same time cannot be produced, because these are defining features of non-imitability. It is the very process of international trade and its competitive process which leads toward the discovery of these determinants. Non-tradable and non-producible factors are natural resources, which fits the traditional Heckscher–Ohlin thinking, and local knowledge network structures which are based on implicit knowledge.
2. The second perspective relates to the capacity of traders to control network relations at the level of markets. This capacity is commonly called "social capital". We include "organizational capital" here. The most important aspect of

[38] Anderson and van Wincoop (2004) deplore the lack of data on impediments to trade, which they call a "scandal and a puzzle". This implies that most empirical tests of trade theory cannot be based on a complete set of data on the determining forces, which is, however, rarely openly acknowledged.

[39] This is another empirical puzzle which so far has only concerned international business studies. For example, very often exporters receive "unsolicited export orders" which show that importer behavior is an independent driver of trade patterns. On this, see Liang and Parkhe (1997).

social capital seems to be that it is necessarily relational, such that it is meaningless to talk of an absolute endowment of social capital which is not partner-specific. It refers to the capacity of actors to control transactions via indirect network relations in which the partners' actions are embedded. Social capital may be a given, yet for a full theoretical explanation we must also pay attention to investment into social capital, because this is necessarily specific to trade relations. In particular, social capital is also created via repetitive transactions in trade. Generally we can say that social capital is very often the unintended result of non-trade actions, whereas organizational capital is artificially created social capital. The most important form of the latter is the firm. We introduce the capability to create firms that operate cross-border as a special determinant of trade.

3. The third perspective refers to power relations between traders. This is the most complex category, because it mostly affects the transactions over MARs. The primordial expression of power is sanctioning force. As we said above, if we start out from a scenario of international anarchy, sanctions mostly are based on the threat of retaliation. This operates on the level of trading relations and is here connected with the concept of reputation. However, even more important is the security of MARs, which is in turn based on the value of MARs that can be used for retaliation. To this, contextual power is added, which is related to the phenomenon of embeddedness. Finally, when analyzing exchange of MARs, the internal political economy of trading states becomes important, because this exchange necessarily takes place across export and import industries.

Let us scrutinize these three aspects of an aggregate analysis of networks in trade in some more detail.

4.1 Competitive advantage and opportunities to trade

International trade rests upon the basic principle of the division of labor, i.e. that foreigners are able to produce a good or a service at lower opportunity costs than domestic producers. This is the Ricardian idea of comparative advantage, one of unshakable foundations of modern economic theory. Nonetheless, from the evolutionary point of view, there are several important caveats which lead us toward an alternative theory of competitive advantages.

The first caveat results from the simple question how traders actually learn to know their own comparative advantages, if there is not yet any international trade. This is a classic tatonnement issue, because the price system only confers this information unequivocally if the competitive process has already reached equilibrium, which we cannot reasonably assume in autarky. Thus, traders' actions need to be interpreted as hypotheses about their own comparative advantage that they attempt to test via entrepreneurial action.[40] The crucial question is what

[40] The interpretation of competition as a process of testing hypotheses has been developed most thoroughly by Kerber (1997). Interestingly, mainstream approaches such as Melitz (2003) avoid this problem because they assume that traders only enter the export business after having identified their level of productivity. However, knowledge about productivity is endogenous to trading, as well as productivity, i.e. the learning process triggered through export processes contributes to productivity increases.

happens after entrepreneurial action has triggered off network evolution. If trade is only regarded as an arbitrage process under perfect information, the classic Ricardian result may be reasonable.[41] However, the discovery of new trading opportunities changes the information structure and may give rise to new market entries both abroad and domestically. Therefore, whether the original entrepreneurial hypothesis about comparative advantage really holds true depends on whether and how fast imitation is possible. For example, British people might venture into wine production after realizing the strong domestic demand for Portuguese wines. Hence, the first error in the Ricardian approach is to take comparative advantage as a given that is simply turned from potentiality to actuality by means of an arbitrage process. Rather, imitation endogenizes comparative advantage.[42]

This strand of thought leads us to the consideration of competitive advantage, which is the evolutionary counterpart to comparative advantage.[43] Most evolutionary approaches to trade emphasize the impact of technology, thereby reaching the conclusion that technological gaps between countries might be absolute advantages.[44] To a certain extent, a synthesis with neoclassical thinking can be achieved if we look for the impediments to imitation. The most obvious impediment occurs if the factor that underlies the competitive advantage can be neither traded nor produced:

1. If it cannot be produced, it is a fixed endowment of a certain location, which cannot be re-produced at other locations. Certain natural resources are a straightforward example. Wines may be producible in Britain, yet the soil and the climate to produce Bordeaux are not.
2. If it cannot be traded, the endowments cannot be changed through movements of factors across borders, and so remain fixed. As "trade" implicitly does only refer to price interactions, this point should be generalized in the sense of transactions, including non-price transactions as communication. So the question is whether the knowledge to produce Bordeaux is movable across borders via economic transactions.

[41] This is the Rauch and Trindade (2003) result. As we have said previously, in their approach the underlying structure of comparative advantages is given, yet possibly concealed because of trade and information costs. The lower the exogenous trade costs, the closer the convergence of the international division of labor with the pattern of comparative advantage. An interesting empirical case study is Bernhofen and Brown (2005) who investigated the opening of Japan in 1859. Since the information about comparative advantages was widely available before, adaptation to comparative advantage proceeded rapidly. The reason was that export goods on both sides were mostly special goods such as tea and silk or goods that were not available in one country (such as wool, certain machinery etc.).

[42] There are already two different uses of the term "endogenous comparative advantage" in the literature. One is related to the Helpman (1981) strand of thinking, which emphasizes the role of increasing returns to scale, while the other, less influential, is Yang Xiaokai's (1994) approach, concentrating on pure specialization advantages. As we see, the evolutionary approach introduces another perspective, one which focuses on the generation and diffusion of knowledge about comparative advantages.

[43] This perspective stems from the rich literature on strategic management, where the sustainability of competitive advantage of firms has been investigated. For one defining contribution, see Barney (1991), and, of course, Porter (1990). There have already been many attempts at generalizing this approach for the case of regions (e.g. Maskell and Malmberg, 1999), networks (Foss 1999) and international trade (e.g. Metcalfe and Diliso 1996).

[44] Dosi et al. (1990) have presented a book-length argument on this.

By this argument, we reach the standard Heckscher–Ohlin conditions when asking for causes of impediments to imitation. This is important in explaining the comparatively robust, yet inconclusive, results of the hundreds of empirical tests of the H–O model of international trade. In the debate, our criterion of impediments to imitations shines in the many attempts to reach a clear definition of "factors" in the Heckscher–Ohlin sense.[45]

Now let us ask for other potential non-tradable and non-producible factors determining competitive advantage. Following existing evolutionary approaches, is technology a candidate? Yes and no. No, because technology is producible and tradable. In the Heckscher–Ohlin framework, this issue is treated by focusing on complementary factors such as human capital, thereby leaving technology aside because of the assumption of a globally homogenous state of technological knowledge and a globally identical production function. From our perspective, to a certain extent this is plausible because technology is a tradable and producible good and therefore cannot be the foundation of sustainable competitive advantage. If H–O theory focuses on human capital, however, this must also be a dead end, because impediments to imitation will, firstly, be directly dependent on the extent to which human capital is mobile and, secondly, on the educational system. In the end, even human capital turns out to be tradable and producible. Portuguese wine growers may emigrate to Britain, taking their knowledge with them. Britons may establish oenological schools.

Already these cursory considerations demonstrate that, from the evolutionary perspective, there are very few candidates for sustainable competitive advantage apart from certain natural resources. We can generalize the criteria in terms of the "capacity to imitate", that is, the competitive advantage of traders depends on the *other* traders' capacity to imitate. Basically, this capacity is knowledge related. This is even true for resources because the crucial question is the degree of substitutability: whether a resource is non-producible or not, does not simply depend on its natural characteristics, but depends on the degree of substitutability with producible alternatives.

In light of this, we can say that there are almost no limits to the capacity to imitate, which implies that comparative advantage in the standard meaning refers to a highly footloose property of countries.[46] To detect resilient impediments to imitate, we need to understand these capacities. These can only be identified and measured relative to the complexity of the object of the imitation. From this we conclude that impediments to imitation in international trade are always linked to the barriers against the intended reproduction of location-specific complexities. Location-specificity marks the difference between a theory of international (or

[45] We cannot go into the details of this issue here. We use the term "factor" in a very loose way intentionally. In the mainstream approach, factors are frequently defined by their property of cross-border immobility. Since this connects with a simple production-theoretic approach, the result is not satisfactory, because it ends up with the simple distinction of capital and labor, which are mobile by any means. In the earlier literature, there was much concern for the question how "factors" might be defined, as e.g. in Caves (1967, 93ff.). In a strict treatment of the problem, we would further need to discuss the property of accumulation, which isI related to storability in Herrmann-Pillath (2001a, chapter 7).

[46] Empirically, this is evident from the "leapfrogging" of countries across developmental stages that took place, for example, in the recent Asia-Pacific growth phase. See Stehrer and Wörz (2003).

inter-regional) trade and a theory of competition among industries and firms. Competitive advantage rests upon complex spatial knowledge structures.[47]

The foremost example of such complex phenomena are location-specific network relations, i.e. the "non-traded interdependencies" which Storper proposed as of central importance for regional competitive advantages.[48] This view also matches the central role of industrial districts and systems of innovation in existing evolutionary approaches to international economics. All these phenomena are based on complex network relations which underlie knowledge flows via localized communication and perception, such that an important part of local knowledge is implicit to these structures. Only parts of these structures (firms, people) can move in space, and only parts of the knowledge contained therein can be reproduced at other places. To fit these into the mainstream discourse on international trade, we propose the term "collective human capital." This concept also allows us to build a bridge to new trade and related theories because the collective aspect can also be understood as a network of externalities.[49]

From the latter point, we reach a final insight. Positive externalities imply that competitiveness rests precisely on the fact that prices do not full internalize the benefits resulting from collective human capital. Hence, its impact will be detected statistically in productivity measures. The larger the externalities, the higher the price competitiveness in trade resulting from productivity differentials. This implies that imperfect property rights can be an important condition for competitiveness. In principle, a similar relation holds for negative externalities that may result in the over-utilization of resources.[50] If we consider the differences between both, the central point is whether there is an underlying rivalry in consumption: resources can be over-utilized, whereas knowledge can be exploited without being exhausted. From this we conclude that a third determinant of competitiveness is whether the resource use implied by international trade leads to the over-exploitation of collective goods. For collective human capital, precisely the imperfection of property rights is a basis for competitive advantage, because it cannot be over-exploited.

However, this implies that the motivation to create human capital must remain partially independent from market incentives. Therefore, the underlying network structures must show a strong impact of cultural and moral norms instead of

[47] The role of complexity in regional specialization has been highlighted in recent contributions to the theory of industrial districts, which are very relevant in our context because competitive advantage in international trade is always based on subnational regional specialization. See the volume edited by Curzio and Fortis (2002).

[48] See Storper (1995). Loasby (1999) makes a related point on "knowledge communities". For an empirical approach and interesting case study, see Grabher (2000).

[49] This relates the evolutionary approach to the "New" growth and trade theories. In the classic volume by Grossman and Helpman (1991), positive externalities of human capital formation play an important role in generating increasing returns, while the factors themselves show decreasing returns. Divergence of growth rates across countries becomes dependent on the spatial reach of those externalities. Interestingly, Rossi-Hansberg (2005) proposes a spatial theory of trade in which border effects are explained via spatially circumscribed positive externalities in production, which reinforce small effects of trade costs on specialization patterns.

[50] For a neoclassical analysis of this interaction between incomplete property rights and comparative advantage, see Karp et al. (2001).

markets, or, in other words, competitive advantage rests upon islands of altruism in the global market process.[51] For example, the knowledge of wine production might be shared implicitly among the Portuguese villagers, such that a single villager who emigrates to Britain might not be able to reproduce the same underlying social structure there. This structure may be upheld by certain traditional moral obligations. Thus, culture comes to the fore as an ultimate source of competitive advantage that emerges from non-imitable collective human capital.

To summarize this section: comparative advantage is only a determining force of international trade if it is a reflection of competitive advantage. Competitive advantage rests on factors that show high impediments to imitation. These are location-specific, non-producible and non-tradable factors, the increased use of which, caused by the expansion of international trade, does not lead to over-exploitation, or, in other words, the use of which is non-rivalrous. The empirical counterparts of this theoretical description can be found in natural resources and collective human capital, with only the latter showing the property of non-rivalry. Since the production of collective human capital cannot fully rely on market incentives, other factors come to the fore. They have been under much scrutiny in the recent upsurge of interest in social capital and non-market determinants of the market system.[52]

4.2 Social capital and transaction-enabling transactions

Cross-border transactions face special challenges in contracting and in implementing contracts. This observation has recently led to a focus on the embeddedness of trade in social relations and on the multinational firm. The latter literature is much older and started from the "internalization approach".[53] In recent times, there has been an additional focus on "knowledge capital" which is basically a special form of collective human capital in the sense suggested in the former section. Both approaches can be unified if we define the multinational firm as a special form of a TET that turns collective human capital into a tradable, namely the firm itself. This complex tradable may still be non-producible and hence cannot be imitated, just in the sense of the theories of the firm that focus on sustainable competitive advantage. Its competitiveness rests upon the now internal externalities, i.e. the public goods character of the so-called headquarter services. However, at the same time, trade with this tradable faces considerable problems in contracting, and so the emerging transaction is the multi- or transnational enterprise which solves these problems at least partly: the TNE is a TET for trade in firms. This includes other forms of international networking among firms, such as strategic alliances or tight

[51] This observation matches the recent reinstatement of altruistic motivations in the economic theory of individual behavior. See e.g. the many references in Bowles' (2004) alternative treatment of 'microeconomics'.
[52] For a general discussion, see Platteau (1994).
[53] Rugman (1986) is a seminal contribution. The internalization concept has been put into a broader context in Dunning's (1993) so-called "eclectic" approach to TNE, which has much common ground with evolutionary thinking.

supplier relations. We call all these phenomena "organizational capital", which relies on the existence of organization-bound collective human capital, the externalities of which are internalized in the organization.[54] This TET has an additional effect on international trade because the TNE is at the same time a TET for trade in goods and services. Thus, the directedness of international investment and the directedness of trade are closely interwoven phenomena.[55]

Starting from this observation, we can again fruitfully apply the dichotomy of transactions and transaction enabling transactions. Moving a firm across international borders presupposes the capacity to do so, which means that this transaction requires additional TETs. For example, the firm need to rely on special legal services to start operations abroad. In most general terms, we can say that, for transactions over organizational capital, social capital (the general capacity to control network relations) is a precondition. In the case of the TNE, very often these are political connections. Therefore, social capital seems to be the more fundamental category as compared to organizational capital.[56]

As we have already noted, social capital is a relational category. We cannot delve here into the very large and multifarious literature with respect to this term, but just propose our own conceptualization.[57] There are two main aspects of social capital that are decisive for trade. The first is that social capital is the foundation for mutual trust, which implies that it solves problems of contracting and hence lowers transaction costs. The second is that social capital as a relational category is directly linked with network structures and is therefore a major determinant of power relations between the actors of trade. Hence there is a connection with our third perspective on trade, namely power.

In the most general terms, trust is linked with the perception of similarity between actors and the experience of successful interactions in the past which have proven the reliability of expectations that are caused by those perceptions of similarity.[58] At the same time, similarity is a result of recurrent interactions among

[54] The concept of "knowledge capital" is scrutinized in Markusen and Maskus (1999). The role of headquarter services is especially emphasized in new trade theory approaches to the firm, as in Krugman (1995).

[55] For an empirical study of the strong effects of the spatial distribution of firms on trade, see Combes et al. (2005). The authors argue that this effect emerges through many channels, such as the direct impact of intra-firm trade, but also the increased flow of information about trade opportunities, the induced convergence of preferences and so forth. Linders et al. (2005) show that FDI and trade seem to stay in a complex relation with each other, because large distances may favor FDI, but if large distance is also related with high trade costs because of the dissimilarity of trading partners, this also impedes FDI. UNCTAD (2002) comes to the practical side and shows how FDI can contribute to raising the export capacity of developing and transition countries.

[56] This is most evident from detailed empirical studies on transnational networking of companies that venture into international markets. See e.g. Blankenburg (1995).

[57] A much-quoted survey of the literature can be found in Dasgupta and Serageldin (2000). For a shorter assessment, see Sobel (2002). The approach developed in Herrmann-Pillath (2001b) is close to Lin (2001) in relating social capital and networks.

[58] Again, the literature on trust is large and growing. For a lucid survey and fruitful synthesis, see Nooteboom (2002). Our emphasis on "similarity" tries to find a close match with formal modelling approaches as in Rauch and Casella (1998) on barriers to trade across groups.

traders. What does similarity mean here? In the empirical research on trade, similarity is linked with phenomena such as common culture, common language or common ethnic identity. Indeed, there is a discernible and strong effect of those phenomena in most gravity models of trade.[59] If we want to understand the reasons, these can be related to the role of implicit knowledge in incomplete contracting. If actors show a higher degree of similarity, they have implicit knowledge about behavioral patterns that complement explicit knowledge formalized in contracts. For example, this may refer to standards of interpreting observed actions or even written statements. It must be stressed, though, that what counts is perceived similarity, not similarity as measured by some external observer of the process.[60]

However, as in the first section, we need to ask whether similarity is an immutable characteristic of the trade relation. In fact, mutual interaction increases similarity of traders via exchange of knowledge, including implicit knowledge. This is the simplest way to create social capital endogenously. The question arises whether international trade might be concomitant to an ever-increasing stock of social capital. This underlies certain optimistic views of globalization which assume that globalization will lead toward a sort of global culture, which would imply an increasing similarity of people, thereby further easing international exchange. However, social capital is a relational category which means that the absolute level is not the decisive factor here. To understand the direction and structure of trade, differences in trust, but not the absolute level of trust, are the relevant causal factors. We need to distinguish between the total level of social capital and the implied aggregate trade activity, and the differential effects of social capital, which influence the structure and direction of trade.

The concept of similarity applied so far is somewhat naïve because it just refers to properties of actors. Social capital is not merely a property of actors because it is relational. At a closer look, this cannot simply mean comparing properties of actors along a given standard, such as the color of their skin. In the network approach, properties of actors refer to positions in network structures. Even a property such as the actor's skin color is only relevant insofar as this property is a causal force in the emergence of certain network structures, and even this causality is endogenous to the network structures. This means, for example, that ethnic identity is not an immutable marker of personality, but is actually a shorthand description of the underlying network relations among actors, in which the color of the skin might serve as a signal for coordinating certain expectations.[61]

[59] For example, some analyses have tried to unearth the impact of "Chineseness" on trade. See Amelung (1991) or Rauch and Trindade (1999). Another example is the research on the lasting impact of historical heritage on trade, as in the Commonwealth case. See Lundan and Jones (2001). A more recent analysis including a large variety of possible determinants of similarity is Linders et al. (2005).

[60] For example, in US–Canada trade, actors might get into unexpected troubles because they assume similarity, yet there are substantial cultural difference among US Americans and Canadians. This was called the "psychic distance paradox" by O'Grady and Lane (1996).

[61] This is the reason most simple assertions about ethnic factors in trade do not hold up to close scrutiny, especially if the micro-foundations are considered. As already quoted above, there is the widespread belief that Chinese business networks impact Asia-Pacific trade, as in Landa (1994). However, on the micro-level there is no systematic evidence that ethnicity serves as an exclusionary device in trade relations, because there are many more complex interaction patterns involved, such as sub-ethnicity, kinship etc. See Menkhoff (1993).

If social capital is related to network positions, there is a direct impact on relative power. This is the main idea in another strand of the literature, which assumes that networks imply the possibility of indirect sanctions, for example, via information flows that affect the reputation of actors in other transactions. However, this does not cover all power implications. Another strand regards the role of an actor in future transactions, which means the actor can have value for another actor because he controls future transactions, which are valuable for the second actor. These transactions can be directly related to network positions, in particular to structural holes.

The entire debate on the role of networks in trade has somehow biased the research toward idiosyncratic factors. Therefore, it should be emphasized that social capital conventionally includes formal institutions that are created endogenously. In the context of international trade, this refers to the lex mercatoria predominantly, but also to certain customary institutional solutions which prevail in certain industries and trading communities, as for example, in countertrade arrangements. In some definitions of social capital (which we do not share here), even formal (inter)governmental institutions are included, which leads us to the third perspective on trade.[62]

Returning to the Ricardian story, these reflections on social capital imply, for example, that for the evolution of trade competing endowments by social capital might be decisive, with the British traders relying on legal institutions, and the Portuguese on group linkages. These differences define certain similarities in social organization and cultural background. Furthermore, British traders might rely on the exploitation of special capabilities to trade in the context of transnational trading firms. As a result, the realization of comparative advantages and the distributions of gains from trade will very much depend on the outcome of this complex competition among diverging social structures, which we treat as aggregates in the concept of social capital.[63]

4.3 Market access and power relations in international trade

As we have said, power relations are the most complex phenomenon in international trade. At the same time, it is the most neglected issue in international economics, especially if broader aspects of power are considered, such as war.[64]

[62] These two regimes have been systematically juxtaposed and compared by Greif (1994) in his classic comparison between two types of long-distance trading communities in the Mediterranean. For a detailed analysis of the different dimensions of social capital, see Woolcock (1998).

[63] Illuminating empirical studies on this competition among social structures can be found in the research on colonialism. Building on Hao (1995), as has been discussed extensively in Herrmann-Pillath (2001b: 354ff.), British traders have not been able to appropriate most of the gains from the China trade because the social capital of Chinese middlemen could not be appropriated. Africa is an opposite example, because colonial institutions destroyed the social capital that underlay trade relations among natives in the pre-colonial times, see Leeson (2005).

[64] For a survey and independent approach to issues of power and trade, see Mansfield (1994) or Strange (1994). My assessment of the literature is the same as in McLaren (1997) who pinpoints the stark difference in the economist's language and everyday language when trade is the topic of conversations, which he relates to the total neglect of power issues in the economic theory of trade.

We start with the observation that power is implied in the capacity (successfully) to sanction deviant behavior, e.g. in post-contractual implementation. This capacity is complex indeed, because the distinction between markets and MARs is very significant here.

As we have already clarified above, if traders need to invest into the development of specific capacities to trade, there is an increasing importance to long-run market access. Since international trade crosses national borders, this is directly linked with government action. Traders always face the possibility that MARs can be withdrawn for some reason. Therefore, even for the individual trader, it is important to know about the possibility to sanction such a withdrawal, because the implied threat might eventually secure long-run market access.

This is the reason why, in international trade, politics is of foremost importance. Traders need political guarantees of market access, in particular if they have to incur specific investments into the exploitation of MARs. There are two solutions to the problem. The first is the exchange of MARs, the second is to set up international regimes governing the establishment and supervision of MARs. In reality, we observe a synthesis, as the WTO/GATT are at the same time markets for MARs as institutional regimes with binding legal commitments.[65] However, in both regards, power does matter. This is obvious in the first, because the international market for MARs is a very imperfect and highly structured market.

It is important to understand the basic configuration here: consider unilateral liberalization, which is the recommended policy according to mainstream theory. Unilateral liberalization, however, is not sufficient to secure MARs, because foreign traders may not build stable expectations regarding the commitment of the domestic government. Therefore, the exchange of MARs serves as an indirect commitment device, because the domestic government voluntarily accepts the possibility of suffering retaliation once it withdraws MARs.[66]

Thus, the crucial determinant is the relative sanctioning power implied by an exchange of MARs. This depends on three factors:

1. First, the degree of specificity of investment into the capacity actually to utilize a MAR, which does not only include specific investments on the markets for goods and services, but also for MARs,
2. Second, the structure of the markets in question and the degree of substitutability of the good in question, which again includes both levels of markets,

[65] In the literature on the WTO, there are two conflicting views. Petersmann (1997) views the WTO as a constitutional arrangement that guarantees individual rights to market access even against national interests. This is a strong claim, as most observers agree that the WTO is built on the principle of national sovereignty and, hence, a sort of national property rights in market access. For a view of the WTO as "market among governments", see Hoekman and Kostecki (2001). Bagwell and Staiger (2002) relate the WTO/GATT to the problem of how to internalize terms-of-trade externalities that arise from less than multilateral trade agreements. Together with the implications for the mutual sanctioning potential, this can be related with the distribution of power among countries; in this vein, see Maggi (1999).

[66] This argument is very similar to Dixit's transaction cost approach. See Dixit (1996). Dixit argues that international contracts are always incomplete. Therefore, trade liberalization must be self-enforcing. This is never possible in complete free trade, because some protectionist devices are needed to threat credibly. Hence, there will always remain a kind of minimum protection in "almost free trade".

3. Third, the size of the import market, because this determines the potential for profits, for example, because of the possibility of exploiting economies of scale of export production.

The sanctioning power of a government implied by a given MAR is higher, the more specific the investments of foreign traders, the less substitutable the MAR, and the larger the domestic market. It is less, if the foreign import product is less substitutable, if the MAR given in return is linked with more specific domestic investments, and if the foreign market is relatively larger.

The important point is that these power relations refer to inter-governmental relations primarily. Thus we can say that the individual trader partakes in the power of his government, so that this power can be regarded as a public good with national scope.[67] It follows that relative power between traders is based in accessibility to these public goods.

What determines accessibility of national public goods? We turn to the internal political economy here.[68] Consider the exchange of MARs. Governments that want to liberalize need other governments that do the same by giving MARs in exchange. Of course, these are not in the same industries, because competitive advantage is the driving force of the different interests in trade. Looking at this exchange from the perspective of domestic politics, we realize that two very different groups are involved on the same side. First, there are the exporters who wish to enjoy secure market access to the foreign market. In order to get this, the home country has to open up its markets, which means that importers and import competing industries are affected. This cannot be taken for granted, since import competing industries might try to prevent the opening of the domestic market for foreign competitors. This is protectionism. Therefore, protectionism is an inherent part of the international market for MARs, if domestic policy linkages are considered.

Thus we see that the domestic government needs to strike a balance between competing domestic interest groups in order to create a viable system of MARs. This balance reflects the power relations between the different groups and the government. This is a new perspective on international political economy: traditionally and in the Ricardian framework, government appears as a source of disturbances and impediments to trade, because it pursues protectionist policies. These policies are seen to be the result of rent-seeking and private interests which influence the behavior of egoistic politicians. From the evolutionary perspective, this is at least partially misleading. As long as governments exist, they are the guarantors of market access via the international exchange of MARs. This role presupposes that they strike an internal balance of interests; rent-seeking is not a dysfunctional mechanism but actually a precondition for making the international market for MARs work.[69] This is because the external balance of mutual

[67] A similar argument can be found in Alesina and Spolaore (2003: 95ff.).
[68] This linkage between external exchange of MARs and domestic politics has been explored in an equilibrium setting by Hillman and Moser (1996). They show that unilateral liberalization upsets internal political balances and actually may induce protectionism in the country that enjoys improved market access.
[69] This rehabilitation of "rent-seeking" can be supported by more general arguments which view rent-seeking as a sort of discovery procedure in the political process. Relevant contributions here are Brooks et al. (1990) and Voigt (1999).

sanctioning power needs to reflect the internal balances of interests in the respective MARs.

Look at Britain and Portugal again. The question is whether the opening of the market for Portuguese wine is really reliable to the Portuguese. If they need to invest specific resources into this MAR, Britain will only be able to commit herself via the exchange of MARs, say, a Portuguese MAR for clothes. This exchange of MARs stabilizes the mutual opening of markets. However, this presupposes that the Portuguese government can strike a balance between the domestic wine producers' and cloth producers' interests. This will very much depend on the specificity of investments in the Portuguese cloth industry which might work as a barrier to exit. At the same time, the mutual sanctioning power will depend on the differences in specificity across wine and cloth production between Britain and Portugal. Britain might be more powerful than Portugal if the specificity of trade investments is relatively lower, if her market size is relatively larger, and if the substitutability of clothes in Portugal is lower than that of wines in Britain. As a result, it might happen that the greater security of MARs for British exporters enable them to invest more sunk costs into the capacity to trade, such that the distribution of the gains from trade shifts in favor of the British side, even in the sense that Britain enjoys absolute advantages in every industry. This results in the achievement of different levels of income from the specialization according to comparative advantage.

In neoclassical political economy, the domestic balance of interests is mainly a result of an exchange of favors between politicians and interest groups which is embedded into a general equilibrium approach to trade.[70] The evolutionary approach emphasizes the fundamental problem of how interests are actually identified, defined and how they are communicated in politics.[71] Politics is regarded as being an entrepreneurial process, too, though different in nature from the market process. In international trade, political entrepreneurs need to invest into inter-governmental relations that secure market access. They operate in a state of fundamental ignorance about comparative advantages which is continuously reproduced by the uninterrupted flow of technological innovations which recurrently shifts competitive advantages. Hence, similar to the market entrepreneurs, their market opening strategies are hypotheses to be tested by the ensuing competitive process.

This has far-reaching consequences for the evolutionary concept of welfare in international economics. Traditionally, welfare is related to the allocative effects of particular institutions. However, if interests are not yet clearly defined and if the market for goods and services shows continuous novelty, these allocative effects are not objectively given at a certain point of time. What counts are the perceptions of opportunities and power relations by the different actors involved. Thus, welfare

[70] For a classic treatment, see Grossman and Helpman (1994). A survey of the different approaches in endogenous trade policy theory is Ursprung (2000) who emphasizes in conclusion that institutional analysis is neglected. For a critical assessment which emphasizes the need to open up interdisciplinary perspectives, see Nelson (1999).

[71] There are still very few systematic treatments of evolutionary approaches to politics. For recent surveys, see Wohlgemuth (2002) and Witt (2003).

is a concept of social consensus about the betterment of society through trade.[72] Because political entrepreneurs need to secure market access by means of exchange of MARs and by striking domestic political balances of interests, welfare reflects an internal balance of power and social consensus about the relative merits of different allocations of MARs between home and foreign countries. There is no way to go beyond the actual interests. From this perspective, there is no such thing as "global welfare".

This implies that a global convergence of domestic perceptions of welfare cannot be simply based on theoretical preferences about free trade. Whether moves toward freer trade emerge as the result of the transactions in the market for MARs, is dependent on the international power balances across countries. We cannot delve into this very complex story here. Many economists and political scientists believe that hegemony is a precondition for free trade prevailing as an institutional regime, because the hegemon is said to experience incentives to support this international public good.[73] A closer look shows this not to be true, because in fact network relations are much more complex than implied by this mono-dimensional category. For example, although trade liberalization after WW II was certainly based on the relative power position of the US, the peculiar embeddedness of the market for MARs in the security context gave rise to strong regionalist tendencies, as epitomized in the rapid rise of the European community. This concept of power balances is also important in understanding the long-run development of particular institutions within the GATT/WTO framework. One of the foremost examples is the Most-Favoured-Nations principle, which can be interpreted as an institutional regime that internalizes terms-of-trade externalities of bilateral exchanges of MARs. Yet, at the same time, this rule produces a free-rider problem in further liberalization of trade. The solution of those conflicting functions very much depends on the implied power balances among countries.[74]

Hence, Britain and Portugal need to reach a common understanding about the benefits of international trade. The economist cannot simply point to the allocative effects and the gains in consumer rents, because there is uncertainty about the competitive advantages that will prevail in the future. In Portugal, there are the losers in the cloth industry. Whether the Portuguese government will put their interest in the second line will depend on many things, including, for example, security relations with Britain. As the recent developments "post-Seattle" have shown, the international trade order cannot be based on the promises of economic theory alone: what is needed is an international consensus, which actually creates common perceptions of the welfare effects of trade. A major concern is whether this agreement over the beneficial effects of trade is embedded in balances of power among the affected countries.

[72] This matches Sen's (1995) assessment of traditional welfare theory, who argues that common perceptions of social welfare cannot be achieved through the aggregation of individual welfare functions but rather through social discourse. The evolutionary substitute is closely related to recent proposals of deliberative approaches to politics (e.g. Elster 1998).

[73] An extended discussion and review of this literature can be found in Gadzey (1994). Gadzey gives a detailed account of the phenomenon of embeddedness in international trade policies.

[74] The role of ToT externalities in the design of the international trade order has been extensively analyzed in an equilibrium setting by Bagwell and Staiger (2002). Bown (2001) uses this approach to analyze power balances in WTO-deviant behavior and dispute settlement. Mansfield and Reinhardt (2003) show that precisely the changing power balances resulting from the success of multilateral liberalization increase the demand for regional trading arrangements.

4.4 Summary

We have now sketched a theoretical framework for the analysis of international trade, which is different from the established approach, although it is apt to include many insights. This is obvious from the fact that we have quoted from a wide range of the cutting-edge mainstream literature. Summarizing the main tenets:

1. The basic ontological category of trade analysis is non-integral networks of transactions in the price and non-price dimension. There are interlocking and interacting networks of transactions and transaction enabling transactions on the level of the markets for goods and services and the level of the markets of market access rights.
2. The opportunities for trade are created by competitive advantages and the capabilities of traders to exploit them. Competitive advantages rest on comparative advantages with high impediments to imitation. These are related to factors which are non-producible and non-tradable. Most generally, these are natural resources and collective human capital (i.e. complex spatially circumscribed networks). Both differ in terms of the rivalry of exploitation among users. In the case of collective human capital, incomplete property rights are the foundation for comparative advantage in price and productivity terms, provided there are non-pecuniary incentives to produce the pertinent positive externalities. Competitive advantage is embedded into non-market networks.
3. An important condition for actually creating trade networks to exploit competitive advantage is the existence of social capital. Social capital is a relational category in networks that enables actors to control transactions. It rests upon the similarity between actors and their position in network structures, and it is an endogenous result of trading activities. Social capital has absolute effects on the level of trade and differential effects on the direction of trade. There are transient forms of institutionalization, as in the case of the international lex mercatoria.
4. A special form of social capital is organizational capital. Organizational capital is organization-bound collective human capital which internalizes positive externalities. Organizational capital is the foundation of the multinational firm and hence, of intra-firm trade. Social capital is the foundation for trade in organizational capital which transforms collective human capital into a tradable commodity. The distribution of social and organizational capital across countries is the most important determinant of the distribution of the gains from trade.
5. International trade is strongly influenced by power relations between traders and their governments. This is because trade presupposes the long-run security of market access, in particular if specific investments are needed to create the capability to exploit the opportunities resulting from market access. Security of access emerges from the market for market exchange rights, in which mutual sanctioning power is balanced among governments. This relative power is determined by different factors, such as market size, substitutability of products, and the degree of specificity of investments into specialization. Traders partake in the relative power of governments as a domestic public good.
6. Welfare becomes a category which cannot be measured in terms of allocative efficiency. Instead, it is related to the internal policy process that leads to a

social consensus about particular patterns of MARs, which is a balance of interests of different social groups. This internal process is linked with the process of finding an external power balance across countries and their governments. Finally, international trade policy emerges as a deliberative process leading to a common perception of the gains from trade.

5 Conclusion

We have outlined an evolutionary approach to international trade that shifts its basic activity to the center of attention, namely trading as an activity as opposed to trade as its result. The question was, what enables traders to trade? There must be some potential, which is competitive advantage over other traders, and there must be a whole array of institutional and social prerequisites that make successful transactions possible. In the answer to that question, many insights of the mainstream approach can be utilized, yet the resulting social ontology of international trade is very different from that of the neoclassical world. These crucial aspects of trade have been clouded in the famous Ricardian story on Wine and Cloth that is being presented to students even today. The true story, however, is one in which people and their capabilities for social action come to the fore again.

In some way, this is old wine in new bottles in the sense that the methodological consequences of this approach are not revolutionary in every context but in the first place simply reshuffle the relations between the disciplines. For example, there is much work on international transactions done in the context of international business studies which is directly relevant to the approach adopted here. So the point here is simply to build a general theoretical framework that shifts those methodologies and results into the center, and moves others to the periphery. The same is true for the approach of trade lawyers who focus on the institutional aspects of trade, which we try to grasp with the concept of market access rights. Thus, the paper will ring familiar with many ears.

On the other hand, there are some clear methodological consequences which go beyond this rearrangement of disciplines and branches in research on the international economy:

First, the balance between modelling and description will shift in favor of the latter, which implies a revival of historical and ethnographic methods in trade analysis. In order to understand the workings of trading networks in their full complexity, there is need for “thicker” description of what happens. This is also true for trade policy if one wishes to understand how new arrangements such as the global intellectual property rights regime of the WTO have actually emerged from a process that was originally not intended to produce that result.

Second, we have to focus on the crucial question of the way in which actors create opportunities and capabilities to trade. This is the truly evolutionary point in the story, because we turn our eyes to the role of entrepreneurship, especially in the sense of institutional and political entrepreneurship. For example, this is very different from the interest group analysis of trade policy, because we ask for the emergence of new ideas about institutional arrangements, such as happened in the recent emergence of consumer concerns about product safety in trade policy which cannot primarily related with producers’ interests.

Third, this paper has not emphasized technology because this is well dealt with in other contributions by evolutionary economists. However, this should not be interpreted as a statement about its lesser importance than institutional issues. In fact, technology is a major driving force of institutional evolution because, for example, the degree of specificity of investments into the capacity to trade depends on it, and because new products often raise the need to create new institutions. The most evident and big case for the latter is the entire GATS process, which is becoming increasingly complex because of the impact of ICT on services. Research on the interaction between technological and institutional evolution remains a major concern in the evolutionary economics of international trade.

Fourth, power is central to our approach, which opens the door widely to the "International Political Economy" mainly attributed to political science. We have tried to show that power differentials across countries are a major determinant of the individual capability of traders to control transactions in international trade. This is a theoretical insight which leaves much room for empirical specification. The question is related to the sometimes heated public controversies about international trade, where some groups claim that the power of the industrial countries necessarily turns trade into an unfair business for the less developed countries. Trade economists mostly regard this belief as naïve, pre-scientific superstitions. Evolutionary trade economists should face those assertions head on and try to understand the role of power in international trade, its measurement and impact on the international division of labor and the related distribution of the gains from trade.

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